INL Overview

“Tackling the most complex energy, security and environmental problems facing the world today”

“Asking the tough questions”

“Why?”

“Why not?”

“Proposing novel solutions”

“Working alongside the best in industry, academia and the national labs”

“Researching, developing and demonstrating”

“Applying the energy of innovation”

“It’s what we do.”

Within the Department of Energy’s system of multiprogram research and development laboratories, Idaho National Laboratory occupies a unique position at the intersection of energy supply and security. DOE’s designated nuclear energy research, development and demonstration leader, INL plays a key role in the global nuclear energy renaissance – the new worldwide reconsideration and expansion of nuclear energy based on its capacity to deliver power cleanly, safely, reliably and on a massive scale.

A legacy of leadership
INL’s historical contributions to nuclear science and engineering are unparalleled – beginning with production of the world’s first usable amounts of electricity from nuclear power and continuing with the design and construction of more than 50 mostly first-of-their-kind nuclear reactors for concept, fuels and materials testing…as well as safety code development.

Today, INL’s Advanced Test Reactor is regarded as the world’s premier materials test reactor – gaining distinction in 2007 as a National Scientific User Facility. The move makes it easier and more cost-efficient for scientists from universities, the commercial sector and other federal agencies to conduct their cutting-edge nuclear fuels and materials research and development domestically – because the capabilities offered by ATR are not available anywhere else in the U.S.

A diversified energy research portfolio
Along with leading nuclear energy research, INL is focused on forming new partnerships across the energy spectrum by working internationally with governments, industry, major academic centers and other laboratories.

This collaborative work includes key energy development research in fossil, alternative and renewable fuels and systems. Notably, INL began contributing to hybrid and electrical vehicle testing and research in association with significant global companies in the early 1980s.

INL performs important research in hydrogen production, cellulosic ethanol and carbon conversion, as well as for DOE's Hydropower and Geothermal programs. INL was a partner in developing the largest first-generation naval fuel reformer in the world for hydrogen generation.

An energy security powerhouse
On the security side of the energy equation, INL is home to the unparalleled Critical Infrastructure Test Range. The Test Range, complete with full scale, functioning systems for the electric power grid, wireless communications, and other key support elements…has become a leading center for the development of technologies and processes needed to protect the nation's critical infrastructures and related components. The Test Range also allows for testing and development of unmanned aerial vehicles, trace explosives detection and testing, and lightweight armor development and testing.

Building for the future
Because INL's innovative researchers and support staff need the right tools and environment to do their jobs, the laboratory has embarked on an ambitious drive to renew itself. From the new Space and Security Power Systems Facility to new offices and laboratories within the Research and Education Campus, new assets are being methodically brought on line to expand the lab's horizons.

Advanced modeling and simulation capabilities at the laboratory took a major leap forward late in 2007 with the unveiling of INL's High-Performance Computing Center and its Ice Storm supercomputer.

And the Center for Advanced Energy Studies – a partnership among INL and Idaho's three universities – is well-positioned to become a premier international resource for promoting and performing research…and revitalizing education and training in energy science, engineering, technology, policy development and related disciplines.

Taken in total, Idaho National Laboratory is a resource of exceptional depth and breadth for a state, region, nation and world struggling to meet rapidly escalating demand for energy – securely delivered to the right place at the right time.